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J 2124001D

EXAMINER

ANTHONY, J

ART UNIT

PAPER NUMBER

8

12M2/0512

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1208

DATE MAILED:

05/12/95

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined

☒ Responsive to communication filed on

☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892.

2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.

3. ☒ ~~Notice of Draftsman's Patent Drawing Review, PTO-948.~~

4. ☐ Notice of Informal Patent Application, PTO-152.

5. ☐ Information on How to Effect Drawing Changes, PTO-1474.

6. ☐

Part II SUMMARY OF ACTION

1. ☒ Claims 157-179 are pending in the application.

Of the above, claims — are withdrawn from consideration.

2. ☒ Claims 1-156 have been cancelled.

3. ☐ Claims — are allowed.

4. ☒ Claims 157-179 are rejected.

5. ☐ Claims — are objected to.

6. ☐ Claims — are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on —. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on —, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed —, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. —; filed on —.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☒ Other Applicant is requested to send in a PTO-1449 form listing the prior-art submitted with the letter of ~~2/1/95~~ 2/10/95

EXAMINER'S ACTION

FINAL REJECTION

1. Claims 157-169 are rejected under 35 U.S.C. § 112, first paragraph, as the disclosure is enabling only for claims limited to where there are relative proportions of all the required components in either functional or numerical terms. Azeotropic compositions are unique compositions in that the boiling point (or vapor pressure) of an azeotrope is either higher or lower than its individually components. A single boiling point or vapor pressure is the characteristic by which the presence or absence of an azeotrope is determined. The claims are unduly broad in that they are generic to a plurality of disclosed patentable distinct species, and an infinite number of non-disclosed and non-contemplated substituents. It would require undue experimentation to determine which combinations of these mixtures would produce "azeotropic blends" or "near azeotropic blends". Furthermore, the claims are unduly broad in view of the limited number of examples. One possible way of overcoming this rejection is to recite either the boiling point of the mixture at a specified pressure or the vapor pressure at a specified temperature to define the azeotropic blends or near-azeotropic blends as claimed by applicant. The fluoroiodocarbon species as well as the additive species would also have to be limited to those specific species where there is sufficient teaching and suggestion in the specification to enable azeotropic mixtures of them. See M.P.E.P. §§ 706.03(n) and 706.03(z).

2. Claims 157-179 rejected under 35 U.S.C. § 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The said claims are vague and indefinite in claiming an azeotropic composition using the term "comprising" because said term leaves the claims open for the inclusion of unspecified ingredients, even in major amounts, see Ex Parta Davis 80 USPQ 448. One of ordinary skill in the art cannot predict whether compositions containing additionally components will be azeotropic and therefore the term "comprising" is indefinite when describing azeotropic compositions.

Furthermore, the claims are vague and indefinite in failing to recite either the boiling point of the mixture at a specified pressure or the vapor pressure at a specified temperature to define the azeotropic blends or near-azeotropic blends as claimed by applicant. Azeotropic compositions are unique compositions in that the boiling point (or vapor pressure) of an azeotrope is either higher or lower than its individually components. A single boiling point or vapor pressure is the characteristic by which the presence or absence of an azeotrope is determined. Therefore by failing to define this critical, defining characteristic applicant fails to particularly point out and distinctly claim the invention subject matter.

Finally all the claims are deemed to be indefinite in that the method does not expressly state that the fire-extinguishant is being discharged onto or into a fire.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

4. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

5. Claims 157-179 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over "The Technical Report" distributed by the Defense Technical Information Center, Alexandria, Va.

The Defense Technical Information Center Technical Report teaches fluoroiodoalkanes such as CF₃I, CF₂ICF₂I, and CF₃CF₂I as fire-extinguishing agents and fire-suppression agents, (see Tables I and II and VII). On pages 39-43, and 62 the reference directly suggests binary mixtures of halogenated carbons and halogenated hydrocarbons including binary mixtures where fluoroiodoalkane is one of the components. In Table VII on page 62 a binary mixture of trifluoroiodomethane and bromoethane is directly taught. Directly taught types of halogenated carbons

are the perfluorocarbons. Directly taught types of halogenated hydrocarbons are the fluorohydrocarbons. On page 16 the reference suggestions are made on ways of determining the appropriate concentration range of the fire-extinguishing agents and/or fire-suppression agents. On page 39 under the heading "Effect of Binary Mixtures of Halogen Compounds", the reference directly talks about binary mixtures having a boiling point. Although the words "azeotropic blend" or "near azeotropic blend" are not directly used, the fact that the reference speaks of binary mixtures having a boiling point and not a boiling range implies if not explicitly at least implicitly that "azeotropic blend" or "near azeotropic blend" are being contemplated by the reference. As such applicant's invention is deemed to be anticipated by the reference.

In the alternative applicant's invention is deemed to be obvious over the applied reference since there is no specific example that explicitly teaches an "azeotropic blend" or "near azeotropic blend" of a fluoroiodocarbon and an additive. Furthermore, there is no specific example where a "non-azeotropic blend" is made comprising a fluoroiodocarbon and an additive selected from the group consisting of perfluorocarbons, hydrofluorocarbons and fluoroethers. Nevertheless applicant's invention is deemed to be at once envisaged by one having ordinary skill in the art from the teachings and suggestions of the reference since the reference directly teaches applicant's claimed species of fluoroiodocarbons, perfluorocarbons, hydrofluorocarbons and fluoroethers as individually useful as

fire-extinguishing agents. The reference also directly teaches and suggests employing binary mixtures of halogenated carbons and halogenated hydrocarbons, see TABLE VII. In any case the courts have declared that to employ two or more materials in combination for the same purpose they are taught to be individually useful is not patentable, In re Kerkhoven, 205 USPQ 1069 (CCPA 1980).

Secondly, Applicant's Claims which are limited to "azeotropic blends" or "near azeotropic blends" are deemed to be strongly suggest by the reference where it speaks of a boiling point for binary mixtures. In any case, the broadest reasonable interpretation is given to unpatented claims, ever more so when these said claims are deemed to be indefinite under 35 U.S.C 112 second paragraph as is the case with applicant's claim language of "azeotropic blend" or "near azeotropic blend". In any case the courts have declared that it is normally not inventive to discover optimum or workable concentration ranges by routine experimentation, In re Aller 105 USPQ 233 (1955).

6. In response to applicant's Amendment B filed 2/6/95 the following comments are being made. Applicant's amendment is deemed to have overcome all the previous prior-art rejections. The new prior-art rejection is thus deemed to have been necessitated by applicant's amendment. Likewise the 35 USC 112 rejections are newly made in light of applicant's amendment.

7. Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL.** See M.P.E.P.

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (703) 308-0446. This examiner can normally be reached on Monday through Friday from 9:00 a.m. to 5:30 p.m. in the eastern time zone. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Gary Geist, can be reached on (703) 308-1701. The group 1200 FAX machine number is (703) 308-4556. Unofficial correspondence transmitted by FAX must be marked "DRAFT". All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner. Any inquiry of a general nature or relating to the status of this application

should be directed to the Group 1200 receptionist whose telephone number is (703) 308-1235.



GARY L. GEIST
SUPERVISORY PATENT EXAMINER
GROUP 2200
1208

Joseph D. Anthony

ART UNIT 1208

5/4/95